9. Food Safety

Office of Food Safety and the Food Safety and Inspection Service

The Food Safety and Inspection Service (FSIS) is the agency within the U.S. Department of Agriculture (USDA) responsible for ensuring the safety, wholesomeness, and correct labeling and packaging of meat, poultry, and egg products. FSIS operates under the authority of the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act. FSIS sets public health performance standards for food safety and inspects and regulates all raw and processed meat and poultry products, and egg products sold in interstate and foreign commerce, including imported products. FSIS is implementing a strategy for change to reduce the incidence of foodborne illness attributable to meat, poultry, and egg products. The Office of Food Safety, headed by USDA's Under Secretary for Food Safety, provides oversight of the agency.

In FY 1999, FSIS inspected over 8.3 billion poultry, 155 million head of livestock, and 3.4 billion pounds of egg products.

The activities of FSIS include:

- Inspecting poultry and livestock, as well as carcasses and processed products made from them;
- Inspecting all liquid, frozen, and dried egg products;
- Setting standards for plant sanitation, process controls, product contents (standards of identity), packaging and labeling, and microbial and chemical contamination;
- Analyzing products for microbiological and chemical adulterants;
- Conducting risk assessments, as well as epidemiologic and other scientific studies, to estimate human health outcomes associated with the consumption of meat, poultry, and egg products. These risk assessments and studies provide science-based information for risk management and communication; and
- Educating consumers about foodborne illness by way of publications, educational campaigns, and a toll-free, nationwide USDA Meat and Poultry Hotline (1-800-535-4555).

FSIS inspectors examine animals before and after slaughter, preventing diseased animals from entering the food supply and examining carcasses for visible defects that can affect safety and quality. Inspectors also test for the presence of drug and chemical residues that violate Federal law. Over the last 20 years, FSIS has made significant progress in reducing the violation rate for drug residues.

(See corrected table 9-2.)

More than 7,500 FSIS inspectors carry out the inspection laws in over 6,000 privately owned meat, poultry, egg product, and other slaughtering or processing plants in the United States and U.S. Territories.

Table 9.1

Livestock, poultry, and egg products federally inspected in 1999

Cattle	43,891,921
Swine	105,755,405
Other livestock	5,420,077
Poultry	8,365,372,345
Egg products	3,400,000,000

In addition, about 250,000 different processed meat and poultry products fall under FSIS inspection. These include hams, sausages, soups, stews, pizzas, frozen dinners, and other products containing 2 percent or more cooked poultry or at least 3 percent raw meat. In addition to inspecting these products during processing, FSIS evaluates and sets standards for food ingredients, additives, and compounds used to prepare and package meat and poultry products.

As part of the inspection process, FSIS inspectors test for the presence of pathogens and toxins such as *Salmonella*, *Listeria monocytogenes*, and *Staphylococcal enterotox*in in ready-to-eat and other processed products. No pathogens are permitted in such products.

FSIS also tests for pathogens in some raw products. In 1994, USDA declared *E. coli* O157:H7 an adulterant in raw ground beef and established a monitoring program for the pathogen in raw ground beef. As part of the Pathogen Reduction/Hazard Analysis and Critical Control Point (HACCP) Systems final rule issued on July 25, 1996, FSIS for the first time set pathogen reduction performance standards for *Salmonella* that slaughter plants and plants producing raw ground products must meet. The final rule also requires meat and poultry slaughter plants to conduct microbial testing for generic *E. coli* to verify the adequacy of their process controls for the prevention of fecal contamination.

Imported meat and poultry products are also subject to FSIS scrutiny. The agency reviews and monitors foreign inspection systems to ensure they are equivalent to the U.S. inspection system before those countries are allowed to export to the United States. When the products reach the United States, products are reinspected at 120 active import locations by import inspection personnel.

Nearly 3 billion pounds of meat and poultry passed inspection for entry into the United States from 32 countries during 1999.

Pathogen Reduction/Hazard Analysis and Critical Control Point (HACCP) Systems—Implementation

FSIS issued its landmark rule, Pathogen Reduction/Hazard Analysis and Critical Control Point (HACCP) Systems on July 25, 1996. The rule addresses the serious problem of foodborne illness in the United States associated with meat and poultry products by focusing more attention on the prevention and reduction of microbial pathogens on raw products that can cause illness. It also clarifies the respective roles of government and industry in food safety. Industry is accountable for producing safe food. Government is responsible for setting appropriate food safety standards, maintaining vigorous oversight and verification to ensure those standards are met, and operating a strong enforcement program to, among other things, deal with plants that do not meet regulatory standards.

The Pathogen Reduction and HACCP rule: (1) requires all meat and poultry plants to develop and implement written standard operating procedures for sanitation (SSOP's); (2) requires meat and poultry slaughter plants to conduct microbial testing for generic E. coli to verify the adequacy of their process controls for the prevention of fecal contamination; (3) requires all meat and poultry plants to develop and implement a system of preventive controls, known as HACCP, to improve the safety of their products; and (4) sets pathogen reduction performance standards for Salmonella that slaughter plants and plants producing raw ground products must meet.

The Pathogen Reduction and HACCP rule applies to over 6,000 federally inspected and 2,400 State-inspected slaughter and processing plants in the United States. Countries that export meat and poultry products to the United States must also meet the requirements of the final rule. Egg products are not covered by the final rule, but FSIS has developed a strategy that would include HACCP to improve the safety of egg products.

Implementation of the new science-based, prevention-oriented food safety system began on January 27, 1997, when all plants, regardless of size, were required to have in place written SSOP's, and slaughter plants were required to begin testing for generic *E. coli*. On January 26, 1998, large plants, those with 500 or more employees, were required to have HACCP systems in place and meet the performance standards for *Salmonella*. Small plants, defined as having between 10 and 500 employees, were required to implement HACCP by January 25, 1999. Very small plants, defined as having less than 10 employees or less than $2.5 million in sales, were required to implement HACCP by January 25, 2000.

Implementation in all plants has been smooth. The new prevention-oriented meat and poultry inspection system is showing positive results. New data from the first 2 years of testing in large plants and the first year of testing in small plants show that the prevalence of *Salmonella* in most categories was substantially lower after HACCP implementation. Large plants had a 90-percent compliance rate with the *Salmonella* performance standards for 1999, and the compliance rate for small plants was 84 percent. Data for very small plants are not yet available.

The tables on the next page illustrate *Salmonella* prevalence and compliance rates for broilers, swine, ground beef, and ground turkey in large plants; and broilers, swine, cows and bulls, and ground beef in small plants.

For more information on HACCP and compliance, visit the FSIS web site at: *http://www.fsis.usda.gov*, and access "HACCP Implementation."

Table 9-2.

Prevalence of *Salmonella* in meat and poultry products: Post-HACCP implementation results from large plants—January 26, 1998, through January 24, 2000.

Class of Product	*Pre-HACCP Baseline Studies (%)***	*Post-HACCP implementation Salmonella Prevalence (%, n=no. samples)*
Broilers	20.0%	10.9% (n=9,639)
Swine	8.7%	4.4% (n=2,475)
Ground Beef	7.5%	5.8% (n=1,696)
Ground Turkey	49.9%	34.6% (n=1,537)

Table 9-3.

Percentage of complete data sets from large plants meeting the *Salmonella* performance standards—January 26, 1998, through January 24, 2000

Class of Product	*Number of Plants*	*Number of Complete Data Sets*	*Percent (Number) Meeting Salmonella Performance Standard*
Broilers	129	189	91% (171)
Swine	32	45	87% (39)
Ground Beef	25	32	88% (28)
Ground Turkey	21	29	93% (27)
Total	207	295	90% (265)

Table 9-4.

Prevalence of *Salmonella* in meat and poultry products: Post-HACCP implementation results from small plants—January 25, 1999, through January 24, 2000

Class of Product	*Pre-HACCP Baseline Studies*	*Post-HACCP Implementation Salmonella Prevalence (%, n=number of samples)*
Broilers	20%	16.3% (n=2,193)
Swine	8.7%	18.2% (n=825)
Ground Beef	7.5%	4.3% (n=14,522)
Cows and Bulls	2.7%	2.3% (n=1,276)

Table 9-5.

Percentage of complete data sets from small plants meeting the *Salmonella* performance standards—January 25, 1999, through January 24, 2000

Class of Product	*Number of Plants*	*Number of Complete Data Sets*	*Percent (Number) Meeting Salmonella Performance Standard*
Broilers	49	43	79% (34)
Swine	28	15	47% (7)
Ground Beef	356	274	87% (239)
Cows and Bulls	37	22	77% (17)
Total	470	354	84% (297)

Food Safety From Farm to Table

Ensuring the safety of food is the first priority of the Office of Food Safety and FSIS. As industry has complied with the new pathogen reduction and HACCP requirements, FSIS is continuing to move more effectively to protect consumers from unsafe meat and poultry. First, as effective implementation occurs within plants, inspection resources can be focused more directly on food safety concerns. Second, FSIS will be able to expand its efforts beyond the four walls in slaughter and processing plants to other parts of the farm-to-table food safety chain. The agency is working cooperatively with other agencies, producers, and various organizations to minimize hazards throughout the farm-to-table continuum and thereby reduce foodborne illness.

HACCP-Based Inspection Models Project

HACCP does not currently apply to all activities associated with the slaughter process. Therefore, FSIS has developed new inspection models for plants that slaughter young, healthy, and uniform animals. The project is a natural extension of HACCP in all meat and poultry plants and will allow FSIS to better focus on public health concerns. The project is an effort to more fully integrate the principles of a science-based, preventive food safety system into slaughter operations. Approximately 25 volunteer plants that slaughter young chickens, market hogs, and young turkeys are participating in the project.

Under the project, FSIS has established performance standards for food safety and non-food safety conditions that volunteer plants must meet. In order to meet these standards, plants are extending their HACCP systems to address the food safety conditions, and they are developing process control plans to address non-food safety conditions. Plants are responsible for identifying and removing meat and poultry carcasses that do not meet these standards. FSIS inspectors conduct oversight inspection and verification inspection to ensure that plants are meeting regulatory requirements and are producing food that is safe for consumers. Baseline organoleptic and microbial data are being collected to document the accomplishments of the current inspec-

tion system. Once each plant completes a transition to the new plant controls and slaughter inspection procedures, data are again collected to provide a before-and-after picture.

The achievements of the new system must meet or exceed the achievements of the current system in order for FSIS to consider the new system to be successful. The project is being carried out through an open public process that allows all interested constituents the opportunity to provide input. The agency intends to redeploy a small number of inspectors currently assigned within plants to verify the safety and wholesomeness of meat and poultry products in the storage, transportation, and retail sale stages of the food production chain. FSIS will cooperate very closely with the States on this project to achieve the agency's goal of establishing one fully integrated system that utilizes all available resources to improve food safety.

Workforce of the Future

Having developed the food safety regulatory system of the future, FSIS must also reshape its workforce, and the way it deploys that workforce to achieve its goal. The agency needs to redeploy its resources, to improve the skills and qualifications of its workforce, and to take full advantage of these skills to meet its goal of reducing foodborne illness and to provide appropriate regulatory oversight within its statutory authorities along the farm-to-table continuum. The agency has identified core competencies in food production practices, auditing skills, and production systems verification. The agency will develop these skills in two ways. It will educate and retrain current employees, and it will recruit and hire employees in occupational series that focus on these skills and qualifications. The workforce of the future will be more versatile and better trained, with opportunities for higher grades.

FSIS would like to introduce and use the professional series, consumer safety officer (CSO), as a major occupation in its workforce. Consumer safety officers possess the needed scientific qualifications for employees at the field level. The conversion of the major part of the agency's workforce from inspectors to CSO's would be accomplished over a period of time. FSIS is also in the process of strengthening the role of veterinarians in the agency. FSIS believes the skills of its veterinary medical officers are underutilized and wants to make better use of the veterinarians' skills in epidemiology, microbiology, toxicology, and other scientific areas throughout the regulated food production and distribution process. A Workforce of the Future Steering Committee was established in 1999 to lead, coordinate, and oversee FSIS workforce planning activities and to guide the transition to the workforce of the future.

FSIS Training and Education Committee (TEC2001)

To complement the Workforce of the Future Initiative, on August 5, 1999, FSIS formed a Training and Education Committee (TEC2001), which will conduct a comprehensive examination of the agency's training and education needs for the coming years.

In support of the FSIS mission, TEC2001 will develop a program designed to ensure a well-educated, competent FSIS workforce, and explore and establish educational partnerships in the community FSIS serves, including other Federal agencies,

State agriculture and public health departments, the international trading arena, industry, and consumer groups. In addition, TEC2001 will explore technology-based approaches to training delivery, such as state-of-the-art technical training, distance learning, and continuing education.

All FSIS employees, including employee organizations, and other stakeholders who share an interest in and commitment to food safety, will have the opportunity to provide input into this program. The wealth of experience from these groups beyond the agency will ensure that all interests are represented.

Federal-State Cooperation

Recognizing the key role that State and local government agencies play in a seamless national food safety system, FSIS launched a Regulator's Food Safety Information Line for State food and public health agencies (1-800-233-3935) in September 1999. Located at FSIS' Technical Service Center in Omaha, NE, the site of the successful HACCP Hotline (1-800-233-3935), the new service answers food safety questions related to meat, poultry, and egg products. The information line is expected to improve cooperation and communication at all levels of government and to provide timely, authoritative answers to State colleagues' questions.

As part of the National Food Safety System (50 States Program) project that began in September 1998, the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), and representatives from several States are working to more fully integrate their laboratories. Six workgroups are working to implement these top three goals: (1) to lead a national movement toward laboratory accreditation under international acceptance standards (ISO standards 17025); (2) to implement a pilot project to efficiently document and validate modified and new analytical methodology; and (3) to promote data exchange. In 1999, eight Federal, State, and local laboratories began a pilot project, in which information is shared among the participating laboratories.

On February 23, 1999, FSIS and FDA signed a Memorandum of Understanding (MOU) to facilitate the exchange of information at the field level about food establishments and operations that are subject to the jurisdiction of both agencies. A recent evaluation of how this MOU is working has shown it to be a great success and found that communication was greatly improved at the local level.

Interstate Shipment

Another example of cooperation between the Federal Government and the States is the Department's bill, S. 1988, on the interstate shipment of meat and poultry products that was introduced by Senators Daschle (D-SD) and Hatch (R-UT) in November 1999. The key objective of the bill is to eliminate the prohibition on the interstate shipment of State-inspected meat and poultry products by ensuring that all meat and poultry products produced in the United States are inspected under a seamless national system enforcing a single set of requirements.

Regulatory Reform

FSIS continues to make progress on regulatory reform. This initiative began in 1995 to improve food safety, allow a more productive use of Federal resources, eliminate unnecessary burdens, and expand consumer choice in the marketplace. One direction in which the agency is headed is a shift away from "command and control" regulations toward performance standards, which provide companies with the flexibility needed to innovate.

In January 1999, FSIS converted into performance standards the regulations governing the production of cooked beef, roast beef, corned beef products, fully and partially cooked meat patties, and certain fully and partially cooked poultry products. Unlike the previous requirements for these products, which mandated step-by-step processing measures, the new performance standards spell out the objective level of food safety performance that establishments must meet, but they allow establishments to develop and implement processing procedures customized to the nature and volume of their production.

FSIS issued a final rule in October 1999 on updated sanitation regulations for official meat and poultry establishments. The rule converts many highly prescriptive sanitation requirements to performance standards, while streamlining and consolidating sanitary regulations applicable to both official meat and poultry establishments.

In November 1999, FSIS issued a final rule that defines each type of enforcement action and procedure it may take against a meat or poultry plant that violates inspection regulations. The rule is part of FSIS' ongoing effort to consolidate, streamline, and clarify meat and poultry product inspection regulations.

In December 1999, FSIS amended the Federal meat and poultry products inspection regulations to harmonize and improve the efficiency of the procedures used by FSIS and FDA for reviewing and listing or approving the use of food ingredients and sources of radiation in the production of meat and poultry products. Except in very limited circumstances, FDA will list in its regulations in title 21 of the Code of Federal Regulations (CFR) food ingredients and sources of radiation that are safe for use in the production of meat and poultry products. Requests for approval to use food ingredients and sources of radiation that are not currently permitted under title 9 or title 21 of the CFR in the production of meat and poultry products will have to be submitted to FDA.

Irradiation of Meat and Poultry

In December 1999, FSIS amended its regulations to permit the use of ionizing radiation for treating refrigerated or frozen uncooked meat, meat byproducts, and certain other meat food products to reduce levels of foodborne pathogens and to extend shelf life. FSIS also amended its regulations governing the irradiation of poultry products so that they would be as consistent as possible with the regulations for the irradiation of meat products.

Emerging Issues

Over the past several years, FSIS has enhanced the public health focus of its food safety program, helping the agency address emerging and re-emerging issues, such as *Campylobacter, E. coli O157:H7,* and *Listeria monocytogenes*.

Campylobacter

Based on current data from the Centers for Disease Control and Prevention (CDC), *Campylobacter* is still the number one cause of sporadic cases of foodborne illness. In January 1999, FSIS began a baseline data collection in young chickens to update a previous baseline study. The information from the baseline study will be made available to support the establishment of a performance standard for *Campylobacter*.

E. coli O157:H7

Another emerging cause of foodborne illness is *E. coli* O157:H7. The CDC estimates that 73,000 cases of infection and 60 deaths occur in the United States each year as a result of this pathogen. In January 1999, FSIS announced the availability of its revised guidance document intended to assist processors of ground beef, especially small processors, in developing procedures to minimize the risk of *E. coli* O157:H7 and other pathogens in ground beef products produced in their establishments. This was an updated version of the guide that FSIS made available to the public in March 1998, and presented in a public meeting on April 22, 1998. To better ensure the safety of the Nation's food supply, FSIS, in January 1999, published a *Federal Register* notice clarifying its policy regarding raw non-intact beef products contaminated with the *E. coli* O157:H7 pathogen.

Listeria monocytogenes

According to the CDC, an estimated 1,100 people in the United States become ill from listeriosis caused by *Listeria monocytogenes* each year, and approximately 20 percent die as a result of the illness. Because pregnant women and newborns, older adults, and people with weakened immune systems caused by cancer treatments, AIDS, diabetes, kidney disease, etc., are at risk for becoming seriously ill from eating foods that contain *Listeria monocytogenes*, FSIS consumer education programs specifically target those groups.

In May 1999, FSIS announced three near-term and four long-term initiatives to help industry control *Listeria monocytogenes* in ready-to-eat products and, thus, better protect public health. First, FSIS published a notice in the *Federal Register* advising plants to reassess their HACCP preventive control plans to ensure they are adequately addressing the pathogen. Second, the agency provided guidance to industry recommending environmental and end-product testing. And third, FSIS carried out extensive educational efforts targeted to at-risk consumers.

New information about *Listeria* has been distributed in many forms: a brochure, *Listeriosis and Food Safety Tips* (available through the Federal Consumer Information Center in Pueblo, CO), a video news release, newspaper features,

and radio interviews. To reach those at risk, a letter from USDA's Under Secretary for Food Safety was sent along with a video news release to more than 50 groups that work with at-risk populations. Publications were distributed through USDA's Food and Nutrition Service at regional meetings with school nurses, and videos were provided for Extension food safety leaders. Outreach to vulnerable populations, and those involved in patient care, is ongoing.

FSIS also has the following four longer term initiatives:

- The agency is drafting a protocol to study the post-production growth of *Listeria monocytogenes* in a wide variety of ready-to-eat products and will ask USDA's Agricultural Research Service to conduct the study;
- FSIS is developing an in-depth verification protocol that can be used to evaluate plants' HACCP plans for ready-to-eat products, particularly regarding *Listeria monocytogenes*;
- A risk assessment of *Listeria monocytogenes*, in conjunction with the Food and Drug Administration, is focusing on all foods, particularly refrigerated, ready-to-eat foods; and
- FSIS is developing food safety standards for ready-to-eat products that will address the need to control all pathogens, including *Listeria monocytogenes*.

For more information on the *Listeria* strategy, visit the FSIS web site at: *http://www.fsis.usda.gov*, and access "*Listeria*."

President's Council on Food Safety

In August 1998, President Clinton signed an Executive Order establishing the President's Council on Food Safety. The Council was established to enhance the coordinated approach to food safety in this country and create a seamless, science-based food safety inspection system. The primary functions of the Council are: to develop a comprehensive strategic Federal food safety plan; advise agencies of priority areas for investment in food safety; ensure that Federal agencies annually develop coordinated food safety budgets; and oversee the recently established Joint Institute for Food Safety Research, ensuring that it addresses the highest priority research needs. The Council is jointly chaired by Agriculture Secretary Glickman, U.S. Health and Human Services Secretary Shalala, and Neal Lane, the President's science advisor and Director of the White House Office of Science and Technology Policy (OSTP).

The Council has been involved in two major activities during the past year. First, it is developing a comprehensive strategic plan for Federal food safety activities that will help Federal agencies address the most important food safety challenges. To develop the strategic plan, due to the President in 2000, food safety officials worked together throughout 1999 delineating a vision and core goals. Agency staff were actively engaged in this strategic planning process. Second, the Council is developing a coordinated food safety budget in order to more fully integrate the budget process among the various agencies with food safety responsibilities. It also provided the President with a response to the 1998 National Academy of Sciences' food safety system study. For more information on the Council and the President's Food Safety Initiative, visit the web site at: *http://www.foodsafety.gov*, and access "President's Council on Food Safety."

Egg Safety Action Plan

Continuing their joint efforts to combat foodborne illness, FSIS and FDA, in June 1999, announced three important new measures to prevent illnesses caused by contaminated eggs. The FDA proposed to require safe handling statements on labels of shell eggs to warn consumers about the risk of illness caused by *Salmonella* Enteritidis (SE). In addition, for the first time, there is a uniform Federal requirement that all eggs and egg products packed for consumers be refrigerated at 45 degrees or below. Retail establishments governed by the proposed FDA regulation include supermarkets, restaurants, delicatessens, caterers, vending operations, hospitals, nursing homes, and schools. Also, FSIS is issuing a directive applying the refrigeration requirement to warehouses and other distribution locations that store shell eggs packed into containers destined for consumers, including transport vehicles. A joint USDA-HHS risk assessment identified the relationships between refrigeration and SE growth.

Finally, the President's Council on Food Safety developed an action plan, announced by the President in December, to further improve the safety of shell eggs and processed egg products. The strategic plan addresses the issue of controlling pathogens, including SE, and suggests further steps to help better coordinate egg safety from the farm to the table.

Foodborne Diseases Active Surveillance Network (FoodNet) and PulseNet

Through the Foodborne Diseases Active Surveillance Network (FoodNet), FSIS, FDA, and the CDC, in collaboration with State and local health departments at nine sites across the country to date, are better able to track the incidence of foodborne illness. The agencies can also monitor the effectiveness of food safety programs or control measures, such as USDA's pathogen reduction and HACCP rule, in reducing foodborne illness. FoodNet does not replace, but rather augments, the many long-standing activities of the Federal and State agencies that are used to identify, control, and prevent foodborne disease hazards. USDA, in conjunction with the other Federal and State agencies, submits an annual report to Congress on FoodNet activities. For more information on FoodNet or for copies of this report, visit the FoodNet web site at: *http://www.cdc.gov/ncidod/dbmd/foodnet*

PulseNet is a national computer network of public health laboratories that helps to rapidly identify and stop episodes of foodborne illness. The laboratories perform DNA "fingerprinting" on bacteria that may be foodborne and the network permits rapid comparison of these "fingerprint" patterns through an electronic database at the CDC. PulseNet is an early warning system that links seemingly sporadic human illnesses together, and, as a result, more outbreaks can be recognized, especially those that involve many States. Investigation of these outbreaks should result in the identification of hazards and implementation of new measures to increase the safety of the food supply. For more information, visit the PulseNet web site at: *http://www.cdc.gov/ncidod/dbmd/pulsenet/pulsenet.htm*

International Food Safety

In today's global marketplace, the food consumers eat is likely to come from a number of different countries. Consumers must have confidence in the safety of their food, whether it is produced domestically or imported. The Codex Alimentarius Commission (Codex), established in 1962, is the major international organization responsible for protecting the health of consumers, developing international food standards, and encouraging fair international trade in food. Codex is jointly supported by two United Nations organizations, the Food and Agriculture Organization and the World Health Organization. There are many Codex committees that set standards for a variety of commodities and that address a number of general issues. The work of Codex, along with national food safety agencies, is important to maintaining consumer confidence in the safety of the food supply.

In March 1999, FSIS made available a background paper which explains the process for determining whether exporting countries have meat and poultry systems and measures in place that are equivalent to the U.S. inspection system with respect to the requirements of the pathogen reduction and HACCP rule. Only countries that have been certified as having equivalent systems are eligible to export meat and poultry products to the United States. The availability of this document, titled *FSIS Process for Evaluating the Equivalence of Foreign Meat and Poultry Regulatory Systems*, was announced in the *Federal Register*. To date, 32 countries are certified as eligible to export meat and poultry to the United States. The agency is also working through Codex's Committee on Food Import and Export Inspection and Certification Systems to develop international guidelines on determining equivalence to better protect the public health and facilitate trade.

In June 1999, the FSIS Administrator was elected to a 2-year term as Chairman of Codex Alimentarius. Currently, there are 165 member countries in Codex Alimentarius, representing 98 percent of the world's population. In the United States, officials from the USDA, FDA, and U.S. Environmental Protection Agency (EPA) participate in Codex activities. The U.S. Manager for Codex reports to the USDA Under Secretary for Food Safety. The Under Secretary for Food Safety chairs the U.S. Codex Policy Committee. For more information on Codex, visit the FSIS Web site: *http://www.fsis.usda.gov, and access* "U.S. Codex Office."

The Office of Food Safety was active in 2000 in several international areas. The Under Secretary chaired an Organization for Economic Cooperation and Development Food Safety Working Group. The group produced papers describing food safety systems in developed countries, which had been requested by the G8 (heads of state or government of the world's leading industrialized nations). The Deputy Under Secretary for Food Safety cochaired a Committee of the Trans-Atlantic Consumer Dialogue organization.

Civil Rights Activities

Several town hall meetings were held in 1999 and 2000 to enhance communications on civil rights matters. The meetings addressed civil rights accountability and disability awareness. Personnel at headquarters and field personnel participated via audio conference. In September 1999 and 2000, FSIS held its first two diversity conferences. More than 150 headquarters employees attended, and others were able to view portions of the conferences by videotapes that were distributed. This year, the Agency employed more than 55 students under various employment programs, including: the Hispanic Association of Colleges and Universities Summer Intern Program, the Washington Internship for Native Students, the USDA/1890 Scholars Program, the DC Federal Job Initiative, and the Minorities in Agriculture, Natural Resources, and Related Sciences Program. The goal of each program is to help build and diversify the applicant pool at the USDA.

Food Safety and Consumer Education

FSIS conducts an extensive outreach program of consumer education to meet information needs on basic safe food handling to avoid foodborne illnesses. One way in which the agency works to reduce foodborne illness is by providing consumers with the information they need to safely handle meat, poultry, and egg products. Communication projects and educational campaigns are solidly science based, drawn from epidemiological studies concerning foods and behaviors that contribute to food safety risks. Projects are also based on research derived from educational theory, market and consumer research, and focus group testing. Information is disseminated to the media, information multipliers, and consumers through the FSIS web site, printed materials, videos, personal contact via USDA's Meat and Poultry Hotline, and presentations by FSIS representatives.

The agency's consumer education programs focus on providing key food safety materials to the general public and special groups who face increased risks from foodborne illness—the very young, the elderly, pregnant women, people who have chronic diseases, and people with compromised immune systems. These materials are based on the latest scientific advice in education and market research concerning foodborne illness. Educational materials include specific safe food handling advice on *E. coli* O157:H7, *Listeria monocytogenes* and other pathogens, food safety information for seniors and children, and *The Food Safety Educator*—a free quarterly newsletter available in print or on the FSIS web site. FSIS also produces news features, public service announcements, and joint food safety projects with other government agencies and food associations. See "For More Information."

Partnership for Food Safety Education

The Partnership for Food Safety Education is a national organization dedicated to educating consumers about the importance of food safety. The USDA serves as Federal Government liaison to the Partnership, along with the U.S. Departments of Education, Health and Human Services, and the EPA. The Partnership, formed in 1996 in response to an independent panel report calling for a public-private partnership of industry, government, and consumer groups to educate the public about safe

food handling to reduce foodborne illness, was officially launched with an MOU in 1997. Government agencies, including FSIS, provide expert guidance and in-kind support to the Partnership.

To date, here are some of the accomplishments of the Partnership. It has:

- built a network of partners—comprised of more than 500 national, State, and local organizations from the public health, government, consumer, and industry sectors—who support the Fight BAC!™ campaign and assist in the distribution of educational materials;
- produced an animated television public service announcement (PSA) featuring the BAC! character, which aired on more than 100 television stations reaching more than 310 million viewers in the early stages of the campaign. The PSA has been translated into other languages, including Spanish, Chinese, Korean, and Vietnamese;
- created and distributed a Fight BAC!™ brochure in both English and Spanish outlining the basics of fighting foodborne bacteria;
- developed a web site (*http://www.fightbac.org*) that has generated millions of hits from the United States and 50 other countries;
- developed and distributed a new curriculum for grades 4-6, "Your Game Plan for Food Safety," which is an educational package that includes a teaching guide, a video, and an interactive web site;
- developed teachers' kits, such as the Fight BAC!™ "Presenter's Guide," which teaches young children in grades K-3 about the importance of safe food practices; and
- developed Community and Supermarket Action Kits.

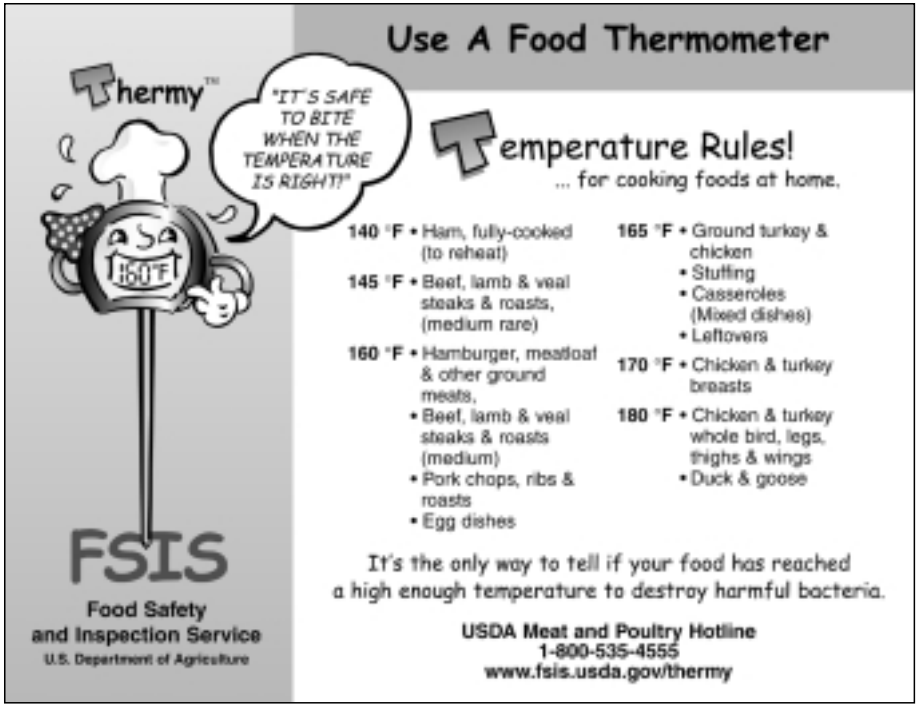
Fight BAC!™ Campaign

The Partnership for Food Safety Education's Fight BAC!™ campaign, which began in 1997, is a far-reaching, ambitious and consumer-friendly public education campaign focused on safe food handling. The Fight BAC!™ campaign's goal is to educate consumers on the four simple steps they can take to fight foodborne bacteria and reduce their risk of foodborne illness. These steps are:

- Clean—wash hands and surfaces often;
- Separate—don't cross-contaminate;
- Cook—cook to proper temperatures; and
- Chill—refrigerate promptly.

The Fight BAC!™ campaign, developed in conjunction with the 1997 National Food Safety Initiative, is designed to make the importance of safe food handling meaningful to American consumers and to motivate them to take action against foodborne pathogens. The campaign is represented by the character "BAC™" (bacteria), the invisible enemy who tries his best to spread contamination wherever he goes. By giving foodborne bacteria a personality, BAC™ makes the learning process more meaningful and memorable for consumers of all ages.

For more information about the Partnership for Food Safety Education and Fight BAC!™, visit *http://www.fightbac.org/*


Use A Food Thermometer
Thermy™
"IT'S SAFE TO BITE WHEN THE TEMPERATURE IS RIGHT!"
160°F
Temperature Rules!
... for cooking foods at home.
140 °F • Ham, fully-cooked (to reheat)
145 °F • Beef, lamb & veal steaks & roasts, (medium rare)
160 °F • Hamburger, meatloaf & other ground meats,
• Beef, lamb & veal steaks & roasts (medium)
• Pork chops, ribs & roasts
• Egg dishes
165 °F • Ground turkey & chicken
• Stuffing
• Casseroles (Mixed dishes)
• Leftovers
170 °F • Chicken & turkey breasts
180 °F • Chicken & turkey whole bird, legs, thighs & wings
• Duck & goose
It's the only way to tell if your food has reached a high enough temperature to destroy harmful bacteria.
USDA Meat and Poultry Hotline
1-800-535-4555
www.fsis.usda.gov/thermy
FSIS
Food Safety and Inspection Service
U.S. Department of Agriculture


FIGHT BAC!
CLEAN
Wash hands and surfaces often.
SEPARATE
Don't cross-contaminate.
CHILL
Refrigerate promptly.
COOK
Cook to proper temperatures.
Keep Food Safe From Bacteria™


FIGHT BAC!
BAC
Keep Food Safe From Bacteria
™

USDA Meat and Poultry Hotline

Consumers have been calling USDA's toll-free Meat and Poultry Hotline (1-800-535-4555) for answers to their food safety questions since 1985. The hotline is staffed by home economists, registered dietitians, and food technologists with expertise in food safety. Consumers are the primary users of the Hotline, but by no means the only ones. Hotline specialists frequently advise and consult with other professionals in government, academia, and industry, and respond to hundreds of media calls each year. To further assist reporters, writers, educators, and other information multipliers, the hotline develops and periodically mails educational materials to several thousand newspaper and magazine food and health editors and some consumer affairs professionals.

The Meat and Poultry Hotline provides direct answers to specific questions on a wide variety of food safety concerns. Between January 1 and December 31, 1999, the hotline received approximately 110,800 calls (including after-hours calls). In addition to basic food handling, storage and preparation questions, the hotline addressed the latest issues: outbreaks of foodborne illness; pathogens such as *Listeria monocytogenes*, *Campylobacter*, and *E. coli* O157:H7; recalls of meat and poultry products; egg safety, and many others. Its nationwide service area enables the Hotline to serve as an early warning system, detecting possible public health threats. An analysis of caller questions and concerns allows FSIS to plan effective educational campaigns, and data collected by the Hotline helps the Agency discern gaps in consumer knowledge.

National Food Safety Information Network

FSIS and other agencies of the U.S. Department of Agriculture belong to the National Food Safety Information Network, which connects the Federal Government's primary mechanisms for providing food safety information to the public. The network includes: *http://www.FoodSafety.gov*; the "Government Gateway to Food Safety Information;" the USDA Meat and Poultry Hotline; the FDA's Center for Food Safety and Applied Nutrition (CFSAN); the USDA/FDA Foodborne Illness Education Information Center; National Food Safety Educators Network (EdNet); and FoodSafe, an online discussion group with 1,800 subscribers from more than 50 countries around the world. The *FoodSafety.gov* web site is an important part of this growing network. In FY 1999, this web site was expanded and enhanced, with additions including the President's Council on Food Safety home page. See *http://www.foodsafety.gov*.

National Food Safety Education Month℠

September is National Food Safety Education Month℠, and it is another activity within the National Food Safety Initiative. The goals of the Month are: (1) to reinforce food safety education and training among restaurant and foodservice workers; and (2) to educate the public to handle and prepare food properly at home, where food safety is equally important—whether cooking from scratch or serving take-out meals or leftovers. In 1999, a proclamation was signed by Agriculture Secretary Dan Glickman, Health and Human Services Secretary Donna Shalala, and OSTP Director Neal Lane, co-chairs of the President's Council on Food Safety, to recognize the

"many educators and consumers who actively promote safe food products and the safe handling of food." FSIS helped develop and distribute thousands of copies of a Consumer Education Planning Guide. To further focus public attention on food safety, the Under Secretary for Food Safety visited a Washington, DC, area elementary school to demonstrate the use of thermometers to check for safe internal temperatures.

Use of Food Thermometers

Building upon the success of Fight BAC!™, FSIS has introduced a new character, Thermy™, as part of a multi-year campaign to promote food thermometers. FSIS used focus group testing to develop the campaign slogan, graphics, and character. In preparation for the campaign rollout, FSIS developed materials for a variety of media. FSIS has also facilitated meetings and information exchange with the Food Temperature Industry Association, an alliance of manufacturers. As a result, several large grocery store chains have launched their own thermometer promotions.

Year 2000 Outreach

The Under Secretary for Food Safety co-chaired USDA's Food Supply Working Group, an interagency creation of the President's Council on Year 2000 Conversion. The working group led an effort to prepare the food and agriculture industries for possible computer and equipment disruptions caused by the calendar rollover to January 1, 2000.

What To Do If You Have a Problem With Food Products

- FOR HELP WITH MEAT, POULTRY, AND EGG PRODUCTS: Call the toll-free USDA Meat and Poultry Hotline at 1-800-535-4555; (202-720-3333 in the Washington, DC, area; TTY, 1-800-256-7072).
- FOR HELP WITH RESTAURANT FOOD PROBLEMS: Call your city, county, or State Health Department.
- FOR HELP WITH NONMEAT FOOD PRODUCTS:

Call or write the FDA. Check your local phone book under U.S. Government, Health and Human Services, to find an FDA office in your area. The FDA's Food and Information & Seafood Hotline is 1-800-332-4010 (202-205-4314 in the Washington, DC, area). Or, call the FDA's Outreach and Information Center (O&IC), operated by CFSAN at 1-888-SAFEFOOD.

For More Information

Food Safety and Inspection Service

USDA's Meat and Poultry Hotline may be reached by calling: 1-800-535-4555 (voice)
202-720-3333 (Washington, DC area), or 1-800-256-7072 (TTY).
Callers may speak with a food safety specialist from 10:00 a.m. to 4:00 p.m. weekdays, Eastern Time. Recorded messages are available at all times.
FSIS web site: *http://www.fsis.usda.gov*

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